

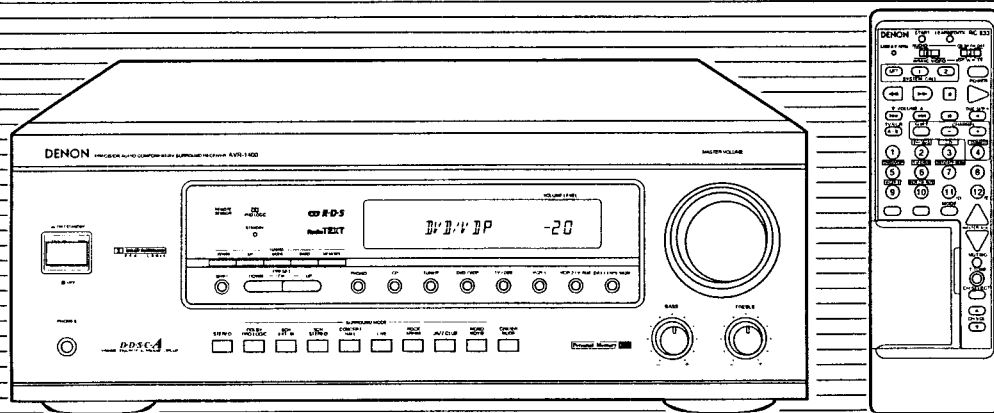
DENON

AV SURROUND RECEIVER

AVR-1400

OPERATING INSTRUCTIONS
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
ISTRUZIONI PER L'USO

INSTRUCCIONES DE OPERACION
GEBRUIKSAANWIJZING
BRUKSANVISNING



FOR ENGLISH READERS
FÜR DEUTSCHE LESER
POUR LES LECTEURS FRANCAIS
PER IL LETTORE ITALIANO
PARA LECTORES DE ESPAÑOL
VOOR NEDERLANDSTALIGE LEZERS
FÖR SVENSKA LÄSARE

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CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

● DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards:
EN60065, EN55013, EN55020, EN60555-2 and EN60555-3.
Following the provisions of 73/23/EEC, 89/336/EEC and 93/68/EEC Directive.

● ÜBEREINSTIMMUNGSERKLÄRUNG

Wir erklären unter unserer Verantwortung, daß dieses Produkt, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht:
EN60065, EN55013, EN55020, EN60555-2 und EN60555-3.
Entspricht den Verordnungen der Direktive 73/23/EEC, 89/336/EEC und 93/68/EEC.

● DECLARATION DE CONFORMITE

Nous déclarons sous notre seule responsabilité que l'appareil, auquel se réfère cette déclaration, est conforme aux standards suivants:
EN60065, EN55013, EN55020, EN60555-2 et EN60555-3.
D'après les dispositions de la Directive 73/23/EEC, 89/336/EEC et 93/68/EEC.

● DICHIARAZIONE DI CONFORMITÀ

Dichiariamo con piena responsabilità che questo prodotto, al quale la nostra dichiarazione si riferisce, è conforme alle seguenti normative:
EN60065, EN55013, EN55020, EN60555-2 e EN60555-3.
In conformità con le condizioni delle direttive 73/23/EEC, 89/336/EEC e 93/68/EEC.
QUESTO PRODOTTO E' CONFORME
AL D.M. 28/08/95 N. 548

● DECLARACIÓN DE CONFORMIDAD

Declaramos bajo nuestra exclusiva responsabilidad que este producto al que hace referencia esta declaración, está conforme con los siguientes estándares:
EN60065, EN55013, EN55020, EN60555-2 y EN60555-3.
Siguiendo las provisiones de las Directivas 73/23/EEC, 89/336/EEC y 93/68/EEC.

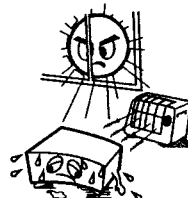
● EENVORMIGHEIDSVERKLARING

Wij verklaren uitsluitend op onze verantwoordelijkheid dat dit produkt, waarop deze verklaring betrekking heeft, in overeenstemming is met de volgende normen:
EN60065, EN55013, EN55020, EN60555-2 en EN60555-3.
Volgens de bepalingen van de Richtlijnen 73/23/EEC, 89/336/EEC en 93/68/EEC.

● ÖVERENSSTÄMMELSESINTYG

Härmed intygas helt på eget ansvar att denna produkt, vilken detta intyg avser, uppfyller följande standarder:
EN60065, EN55013, EN55020, EN60555-2 och EN60555-3.
Enligt stadgarna i direktiv 73/23/EEC, 89/336/EEC och 93/68/EEC.

NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION / NOTE SULL'USO NOTAS SOBRE EL USO / ALVORENS TE GEBRUIKEN / OBSERVERA



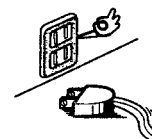
- Avoid high temperatures
Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
Beachten Sie, daß eine ausreichende Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées
Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte
Assicuratevi che ci sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas
Permite la suficiente dispersión del calor cuando está instalado en la consola.
- Vermijd hoge temperaturen
Zorg voor een degelijk hitteafvoer indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer
Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.



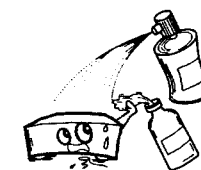
- Keep the set free from moisture, water, and dust.
- Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo.
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsätt inte apparaten för fukt, vatten och damm.



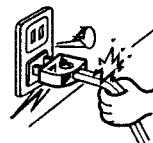
- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerät kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.



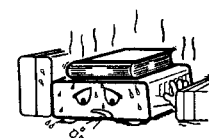
- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Disinnestare il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopcontact wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid.



- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevi che l'unità non venga in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Laat geen insectenverdelgende middelen, benzine of verdunder met dit apparaat in contact komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje.



- Handle the power cord carefully
Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
Tenir la prise lors du débranchement du cordon.
- Maneggiare il filo di alimentazione con cura.
Agire per la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado.
Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanter het netsnoer voorzichtig.
Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt.
Håll i kabeln när den kopplas från el-uttaget.



**(For sets with ventilation holes)*

- Do not obstruct the ventilation holes.
- Die Belüftungsoffnungen dürfen nicht verdeckt werden.
- Ne pas obstruer les trous d'aération.
- Non coprire i fori di ventilazione.
- No obstruya los orificios de ventilación.
- Die ventilatöpeningen mogen niet worden geblokkeerd.
- Tapp inte till ventilationsöppningarna.



- Never disassemble or modify the set in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontare mai, né modificare l'unità in nessun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Nodit dit apparaat demonteren of op andere wijze modifieren.
- Ta inte isär apparaten och försök inte bygga om den.

- We greatly appreciate your purchase of the AVR-1400.
- To be sure you take maximum advantage of all the features the AVR-1400 has to offer, read these instructions carefully and use the set properly. Be sure to keep this manual for future reference should any questions or problems arise.

"SERIAL NO. _____
PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE
CABINET FOR FUTURE REFERENCE"

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● ACCESSORIES

Check that the following parts are included in addition to the main unit:

1 Operating instructions	1	5 AM loop antenna	1
2 Service station list	1	6 FM indoor antenna	1
3 Remote control unit (RC-833)	1	7 FM antenna adaptor	1
4 R6P/AA batteries	2		



1 BEFORE USING

Pay attention to the following before using this unit:

- **Moving the set**
To prevent short circuits or damaged wires in the connection cords, always unplug the power cord and disconnect the connection cords between all other audio components when moving the set.
- **Before turning the power operation switch on**
Check once again that all connections are proper and that there are not problems with the connection cords. Always set the power operation switch to the standby position before connecting and disconnecting connection cords.

- **Store this instructions in a safe place.**
After reading, store this instructions along with the warranty in a safe place. Also fill in the items on the back page for your convenience.
- **Note that the illustrations in this instructions may differ from the actual set for explanation purposes.**

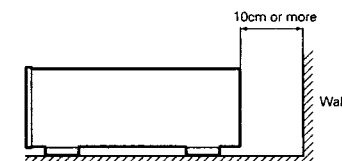
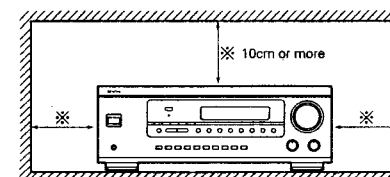
2 CAUTIONS ON INSTALLATION

Noise or disturbance of the picture may be generated if this unit or any other electronic equipment using microprocessors is used near a tuner or TV.

If this happens, take the following steps:

- Install this unit as far as possible from the tuner or TV.
- Set the antenna wires from the tuner or TV away from this unit's power cord and input/output connection cords.
- Noise or disturbance tends to occur particularly when using indoor antennas or 300 Ω / ohms feeder wires. **We recommend using outdoor antennas and 75 Ω / ohms coaxial cables.**

For heat dispersal, leave at least 10 cm of space between the top, back and sides of this unit and the wall or other components.



3 CAUTIONS ON HANDLING

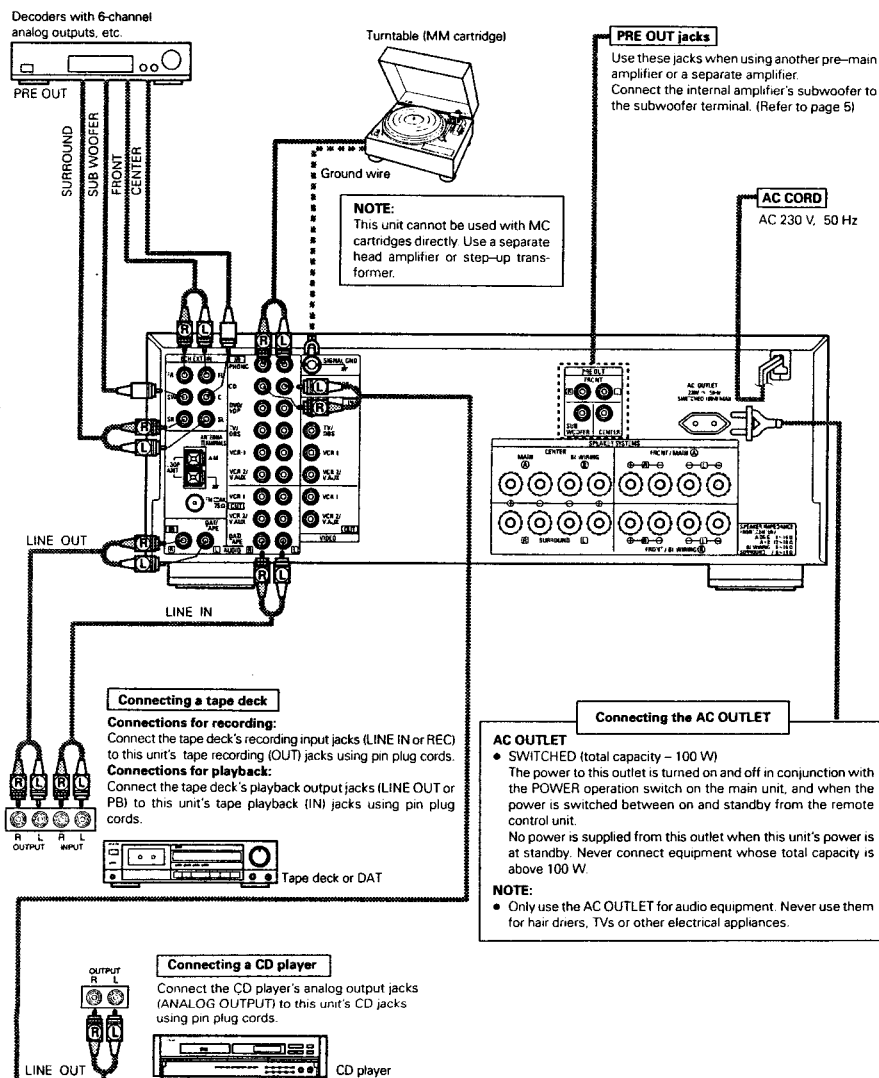
- **Switching the input function when input jacks are not connected**
A clicking noise may be produced if the input function is switched when nothing is connected to the input jacks. If this happens, either turn down the MASTER VOLUME control or connect components to the input jacks.
- **Muting of PRE OUT jacks**
The PRE OUT jacks include a muting circuit. Because of this, the output signals are greatly reduced for several seconds after the power operation switch is turned on or input function, surround mode or any other set-up is changed. If the volume is turned up during this time, the output will be very high after the muting circuit stops functioning. Always wait until the muting circuit turns off before adjusting the volume.
- **Whenever the POWER operation switch is in the OFF state (see page 7), the apparatus is still connected on some AC line voltages.**
Please be sure to unplug the cord when you leave home for, say, a vacation.

4 CONNECTIONS

- Do not plug in the power cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- Use the AC OUTLETS for audio equipment only. Do not use them for hair driers, etc.

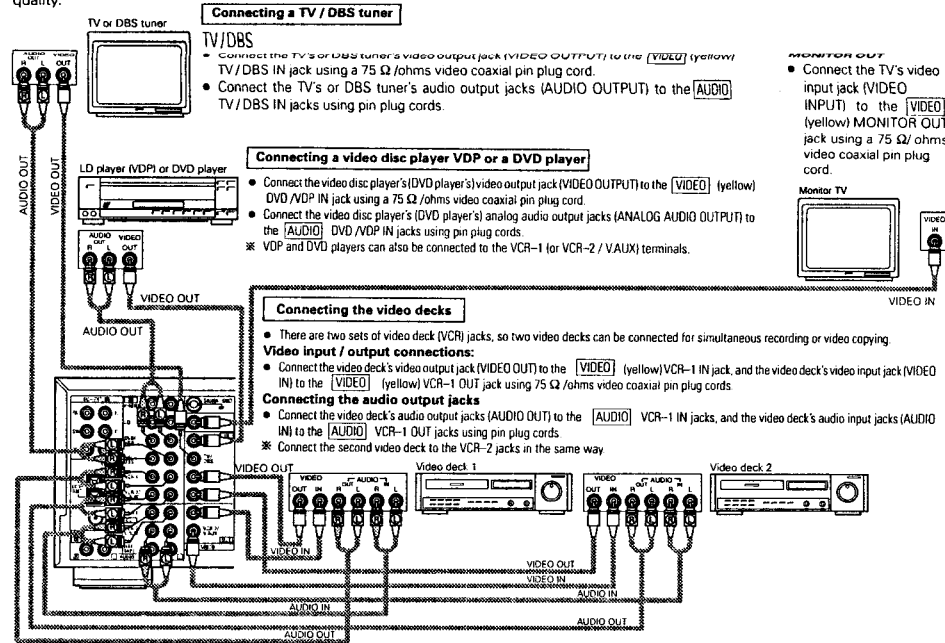
- Note that binding pin plug cords together with power cords or placing them near a power transformer will result in generating hum or other noise.
- Noise or humming may be generated if a connected audio equipment is used independently without turning the power of this unit on. If this happens, turn on the power of the this unit.

Connecting the audio components

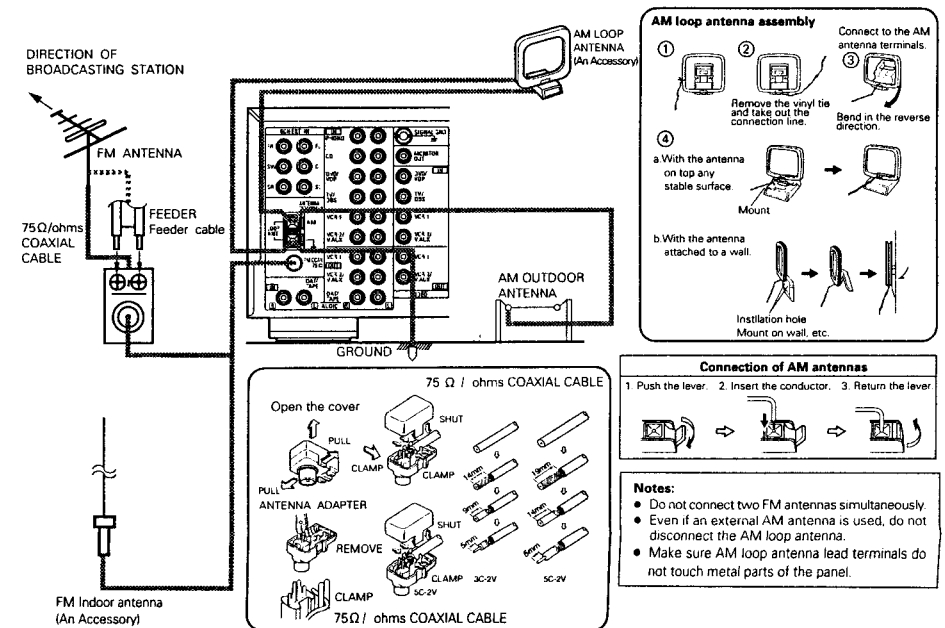


Connecting the video equipments

To connect the video signal, connect using a 75 Ω /ohms video signal cable cord. Using an improper cable can result in a drop in video quality.

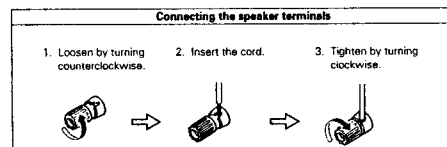


Connecting the antenna terminals



Speaker system connections

- Connect the speaker terminals with the speakers making sure that like polarities are matched (⊕ with ⊕, ⊖ with ⊖). Mismatching of polarities will result in weak central sound, unclear orientation of the various instruments, and the sense of direction of the stereo being impaired.
- When making connections, take care that none of the individual conductors of the speaker cord come in contact with adjacent terminals, with other speaker cord conductors, or with the rear panel.

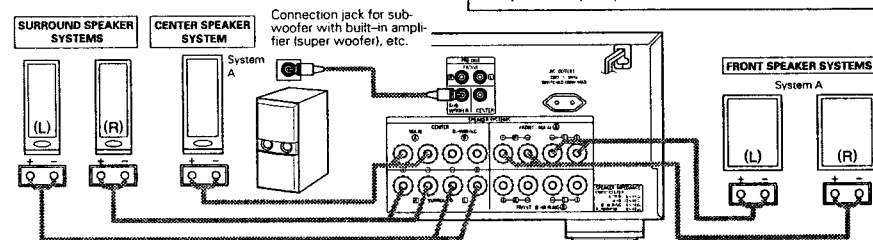


Speaker Impedance

- When speaker systems A and B are used separately, speakers with an impedance of from 6 to 16 Ω/ohms can be connected for use as front and center speakers.
- Be careful when using two pairs of front or center speakers (A + B) at the same time, since use of speakers with an impedance of less than 12 Ω/ohms will lead to damage.
- Speakers with an impedance of 6 to 16 Ω/ohms can be connected for use as surround speakers.
- The protection circuit may operate or damage may occur when speakers with an impedance outside of the above range are used.

Precautions when connecting speakers

If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism. If this should happen, move the speaker away to a position where it does not have this effect.

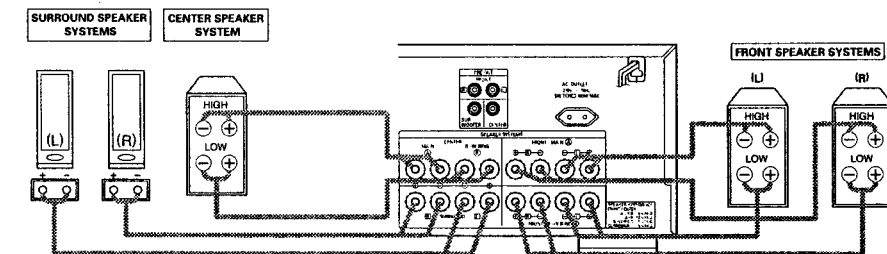


- About bi-wiring: If your speakers have bi-wiring terminals, you can achieve higher quality sound by adding cords and using bi-wiring, as shown on the diagram below.
- By connecting speaker systems to both the speaker A and B terminals, you can play the same music source simultaneously in different rooms. (Use speakers with impedances of 12 Ω/ohms.)

Bi-wiring procedure

SPEAKER SYSTEM (BI-WIRING)

When bi-wiring with bi-wireable speakers, connect the mid and high range terminals to SYSTEM (A) [or SYSTEM (B)], the low range terminals to SYSTEM (B) [or SYSTEM (A)].



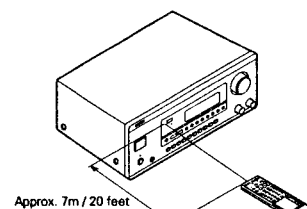
Protector circuit

This set has a built-in high speed protector circuit which protects the internal circuitry from strong currents that may be generated if the speakers are used with their cords incorrectly connected to the speaker terminals or if the cords are short circuited, and when the internal temperature becomes abnormally high due to blocked ventilation holes or continuous high power conditions while using speakers other than the specified ones. If this protector circuit is activated, the speaker output is automatically cut off, the display turns off and the STANDBY LED flashes rapidly. If this should happen, be sure to turn off the set's power, then check the speaker cord connections, remove the object blocking the ventilation holes, or replace the speakers with speakers with impedances within the specified range before turning the power back on. The sound will be muted for several seconds, after which the set will operate normally.

5 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

Range of operation of the remote control unit



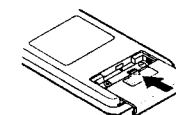
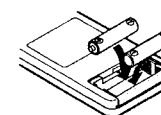
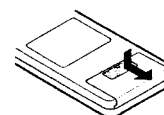
Point the remote control unit at the remote control sensor as shown on the diagram at the left.

NOTES:

- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
- Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

Inserting the batteries

- Press as shown by the arrow and slide off.
- Insert the SUM3 batteries properly, as shown on the diagram.
- Close the lid.



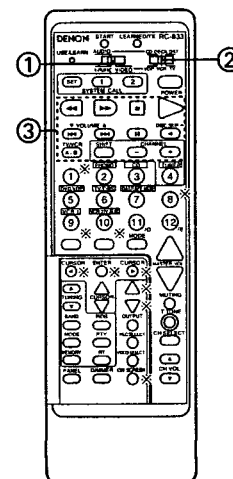
NOTES:

- Use only AA, R6P, UM-3 batteries for replacement.
- Be sure the polarities are correct. (See the illustration inside the battery compartment.)
- Remove the batteries if the remote control transmitter will not be used for an extended period of time.
- If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.
- The codes that have been learned may be lost if removed batteries are not replaced within about 5 minutes.

System code buttons

DENON remote-controllable audio components can be controlled using this unit's remote control unit. Note that some components, however, cannot be operated with this remote control unit.

Note that some components, however, cannot be operated with this remote control unit.



- Set to slide switch to "AUDIO" ("AVR / AVC").

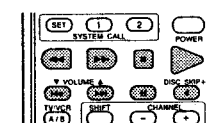


- Set the slide switch to the position for the component to be operated (CD, DECK or DAT).



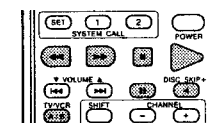
- Use the buttons shown below to operate the audio component. For details, refer to the respective component's manual.

a. For CD players and DATs



- Manual search (reverse and forward)
- Stop
- Play
- Auto search
- Pause
- Disc selection
- ICD changer only

b. For tape decks (DECK)



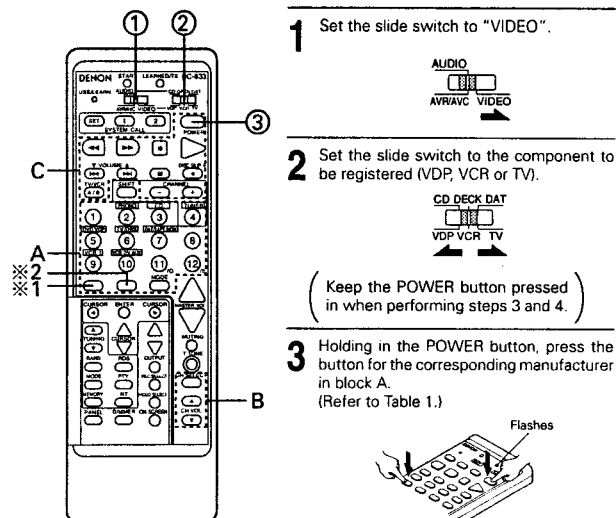
- Reverse
- Forward
- Stop
- Forward play
- Pause
- A/B : A/B deck selection
- Reverse play

* These buttons does not function. (Some buttons can be used by using the preset memory or the learning function.)

Preset memory

DENON and other makes of components can be operated by setting the preset memory for your make of video component. **Operation is not possible for some models, however. In this case use the learning function (see page 6) to store the remote control signals.**

For instructions on clearing the presets stored in the preset memory, see page 7.



1 Set the slide switch to "VIDEO".

2 Set the slide switch to the component to be registered (VDP, VCR or TV).

3 Holding in the POWER button, press the button for the corresponding manufacturer in block A. (Refer to Table 1.)

4 Next, while holding in the POWER button, press the button for the code in block B. (Refer to Table 1.) The operation is completed when the LEARNED / TX LED lights.

5 To continue registering other components, repeat steps 2 to 4.

The LEARNED / TX LED flashes.

This remote control unit can be used to operate components of other manufacturers without using the learning function by registering the manufacturer of the component as shown on Table 1.

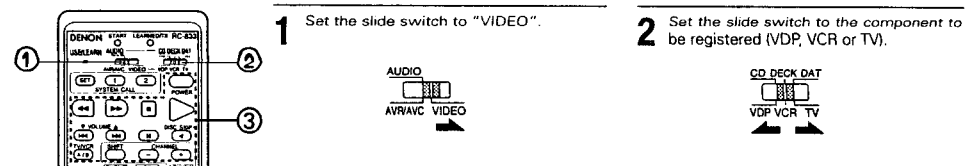
Table 1: Combinations of Personal System Codes for Different Manufacturers

"VDP"				"VCR"				"TV"			
A	B	CH SELECT	CH VOL	A	B	CH SELECT	CH VOL	A	B	CH SELECT	CH VOL
①	DENON A	DENON B	DENON C	①	—	—	—	①	—	—	—
② (PHONO)	HITACHI A	—	—	②	(PHONO)	HITACHI A	HITACHI B	②	(PHONO)	HITACHI A	—
③ (CD)	MITSUBISHI A	—	—	③	(CD)	MITSUBISHI A	MITSUBISHI B	③	(CD)	MITSUBISHI A	—
④ (TUNER)	PANASONIC A	—	—	④	(TUNER)	PANASONIC A	PANASONIC B	④	(TUNER)	PANASONIC A	—
⑤ (DVD / VDP)	JVC (VICTOR) A	—	—	⑤	(DVD / VDP)	JVC (VICTOR) A	JVC (VICTOR) B	⑤	(DVD / VDP)	JVC (VICTOR) A	—
⑥ (TV / DBS)	SONY A	SONY B	SONY C	⑥	(TV / DBS)	SONY A	SONY B	⑥	(TV / DBS)	SONY A	—
⑦ (DAT/TAPE MON)	PIONEER	—	—	⑦	(DAT/TAPE MON)	PIONEER	—	⑦	(DAT/TAPE MON)	PIONEER	—
⑧	TOSHIBA A	—	—	⑧	—	TOSHIBA A	—	⑧	—	TOSHIBA A	—
⑨ (VCR-1)	SANYO A	—	—	⑨	(VCR-1)	SANYO A	SANYO B	⑨	(VCR-1)	SANYO A	—
⑩ (VCR-2 / AUX)	SHARP A	—	—	⑩	(VCR-2 / AUX)	SHARP A	SHARP B	⑩	(VCR-2 / AUX)	SHARP A	—
⑪ / 0	NEC A	—	—	⑪	/ 0	NEC A	NEC B	⑪	/ 0	NEC A	—
⑫ / E	PHILIPS A	—	—	⑫	/ E	PHILIPS A	PHILIPS B	⑫	/ E	PHILIPS A	—
※ 1	RCA A	—	—	※ 1	RCA A	RCA B	RCA B	※ 1	RCA A	—	—
※ 2	GENERAL ELECTRIC A	—	—	※ 2	GENERAL ELECTRIC A	GENERAL ELECTRIC B	GENERAL ELECTRIC B	※ 2	GENERAL ELECTRIC A	—	—
MODE	MAGNAVOX A	—	—	MODE	MAGNAVOX A	MAGNAVOX B	MAGNAVOX B	MODE	MAGNAVOX A	—	—

NOTES:

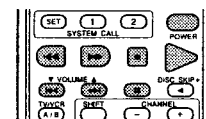
- The signals for the pressed buttons are emitted while setting the preset memory. To avoid accidental operation, cover the remote control unit's transmitting window while setting the preset memory.
- Some models and years of manufacture of components of the manufacturers listed on Table 1 cannot be used.

Operation after components are registered



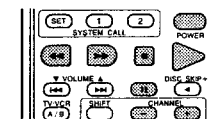
3 Use the buttons shown below to operate the video component. (Some models cannot be used.) For details, refer to the respective component's manual.

a. VDP



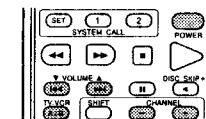
POWER : Power on/off
 ◀▶ : Manual search (reverse and forward)
 ■ : Stop
 ▶ : Play
 ◀▶ : Auto search
 || : Pause

b. VCR



POWER : Power on/off
 ◀▶ : Manual search (reverse and forward)
 ■ : Stop
 ▶ : Play
 || : Pause
 CHANNEL : Channel selection
 +, -

c. TV

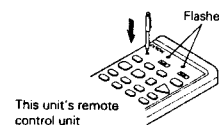


POWER : Power on/off
 VOLUME : Volume up/down
 ▲, ▼ : TV/VCR : TV/video selection
 CHANNEL : Channel selection
 +, -

Remote control unit learning function

If your AV components are not DENON products or if operation is not possible with the preset memory settings, the components' remote control signals can be "learned" to enable remote control operation. The buttons that can be "learned" are the CD, DAT and DECK system buttons (see page 5) and the VDP, VCR and TV system buttons (see page 6). (For the TV only, the A block buttons can also be "learned".)

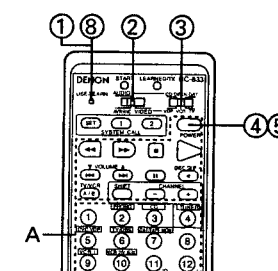
1 Press the USE/LEARN selector button with the tip of a pen etc., to set the learn mode. Both the START and LEARNED / TX indicators flash.



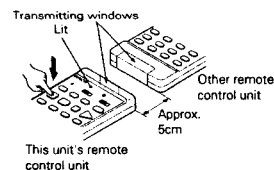
2 Set the program switch to the side to be "learned". Set to the AUDIO side for the CD, tape deck or DAT position, to the VIDEO side for the VDP, VCR or TV position.



3 Set the program switch to the position to be "learned".



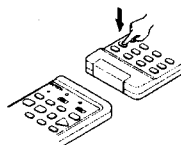
- 4 Set the remote control units so they are facing each other, then press the button to be "learned" on this unit's remote control unit.



The indicator stops flashing and the START LED lights. The learnable buttons are the buttons which can be operated with the DENON system codes for the CD player, DAT and tape deck, the buttons which can be operated with the preset memory for the VCR, VDP and TV. For the TV only, however, the buttons in the section indicated "A" on the diagram above can also be "learned". Use these to "learn" TV channels.

NOTE: Use button (11) / 0 as the 0 number button, button (12) / E as the enter button.

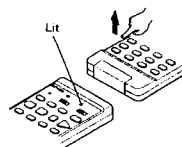
- 5 Check that the START LED is lit, then press the button to be "learned" on the other remote control unit.



NOTES:

- Up to 26 codes can be "learned", but this number may be lower if the codes are long.
- If a non-learnable button is pressed or two or more buttons are pressed at once, the two LEDs will once again light when the button(s) is released.
- If the codes could not be stored, the LEARNED / TX LED does not light after the START LED turns off. For limited number of models, codes cannot be stored in RC-833.
- If the two LEDs start flashing rapidly after the START LED lights, this means that the memory is already full, and the code you have just attempted to store was not stored. To "learn" that code, first perform the resetting operation.

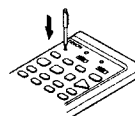
- 6 Once the START LED turns off and the LEARNED / TX LED lights, release the button on the other remote control unit.



The two LEDs start flashing again.

- 7 To "learn" other buttons, repeat steps 2 to 6.

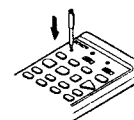
- 8 Once the learning operation is completed, press the USE / LEARN selector button again. The two LEDs stop flashing and the learning mode is cancelled.



Check that the stored codes work properly.

Clearing "learned" remote control signals and the preset memory settings

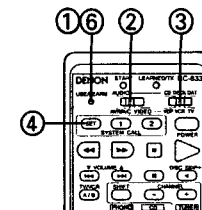
- 1 Press the USE / LEARN selector button with the tip of a pen, etc., to set the learn mode.



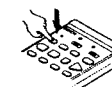
- 2 To clear "learned" remote control signals, set the slide switch to the position at which the signals were "learned". To clear the preset memory settings, set the slide switch to "VIDEO".



- 3 Set the slide switch to the position at which the signals were "learned" or at which the preset memory settings were set.



- 4 Press the SYSTEM CALL SET button, and hold it in for at least four seconds.



- 5 When both the START and LEARNED / TX LEDs light simultaneously, all the stored codes are cleared.



- 6 Press the USE / LEARN selector button.

6 OPERATIONS

Preparations for playback

Preparations: Check that all connections are proper.

- 1 Set to the center position.



- 2 Set the remote control unit's slide switch to the AUDIO position. (only when operating with the remote control unit)

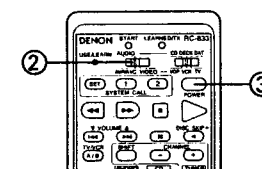
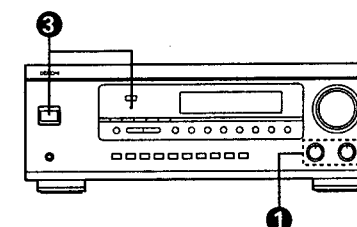


- 3 Turn on the power. Press the POWER operation switch (button).



ON / STANDBY

The power turns on and "STANDBY" indicator is lit. Several seconds are required from the time the POWER operation switch is set to the "ON / STANDBY" position until sound is output. This is due to the built-in muting circuit that prevents noise when the POWER operation switch is turned on and off.

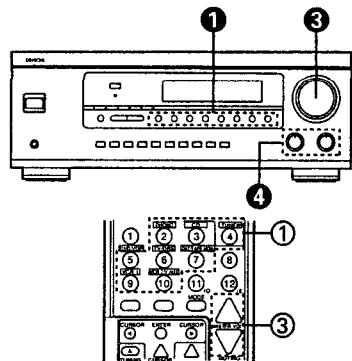


Set the POWER operation switch to this position to turn the POWER on and off from the included remote control unit (RC-833).

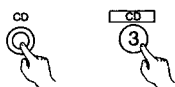
OFF

The power turns off and "STANDBY" indicator is off. In this position, the power cannot be turned on and off from the remote control unit.

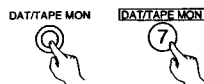
Playing the program source (Stereo playback)



- 1 Press the button for the program source to be played.
EX 1: CD



EX 2: DAT / TAPE



- Press the button once to switch the source to DAT / TAPE input, again to cancel DAT / TAPE input.

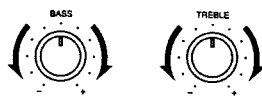
- 2 Start playback on the selected component.
For operating instructions, refer to the various components' manuals.
- 3 Adjust the MASTER VOLUME control.



The volume is indicated on the set's display.

- The volume can be adjusted in units of 1 dB from -60 to 0 to +18 dB.

- 4 Adjust the BASS and TREBLE.



Turn the control clockwise to increase the bass or treble, counterclockwise to decrease it.

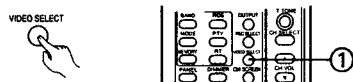
NOTE:

The tone controls only affect the pre-out output and speaker output of the front left and front right channels.

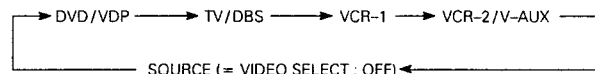
Simulcast playback

Use this switch to monitor a video source other than the audio source.

- 1 Press the VIDEO SELECT button repeatedly until the desired source appears on the display.



The video source switches as follows each time the button is pressed:



* Cancelling simulcast playback.

- Select "SOURCE" using the video select button.
- Switch the program source to the component connected to the video.

Using the muting function

Use this to turn off the audio output temporarily.

- 1 Press the MUTING button.
* Cancelling MUTING mode.
Press the MUTING button again.

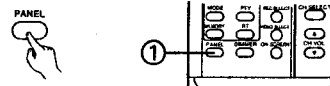


- * **Caution:** Switching off the power of the unit and the remote control unit will cancel the settings.

Front panel display

When an operation is performed on the main unit or on the remote control unit, that operation appears on the display, making it possible to check the operation visually. The set's operating status can also be checked on the display using the procedure described below.

- 1 Press the PANEL button.



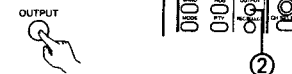
The input and output sources and the surround setting, etc., appear in order on the display each time the button is pressed.

Listen with headphones

- 1 Connect the headphones to the PHONES jack of the front panel.



- 2 Press the OUTPUT button to play the sound over the headphones only.



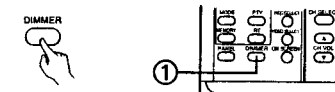
- The output to the speaker and pre-out jacks is turned off and no sound is produced from the speakers.

- * **Caution:** Switching off the power of the unit and the remote control unit will cancel the settings.

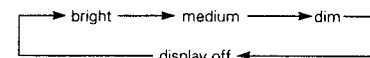
Using the dimmer function

Use this function to adjust the brightness of the main unit's display.

- 1 Press the DIMMER button.



The brightness changes in the following order each time the button is pressed:



Recording the program source (recording the source currently being monitored)

- 1 Follow steps 1 to 3 under "Playing the program source".

- 2 Start recording on the tape or video deck.
For instructions, refer to the component's operating instructions.

Simultaneous recording

The signals of the source selected with the function selector button are output simultaneously to the DAT / TAPE and VCR 1 and 2 REC OUT jacks. If a total of three tape and/or video decks are connected and set to the recording mode, the same source can be recorded simultaneously on every decks. In addition, if the TAPE MONITOR (DAT / TAPE) button is pressed, the audio signals from the tape deck are output to the VCR 1 and 2 AUDIO REC OUT jacks.

System call (remote control unit)

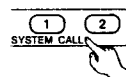
This function allows you to preset frequently used operation patterns in the remote control unit then automatically send a series of up to ten remote control codes with a single button.

- 1 Presetting**
Press the SET button.

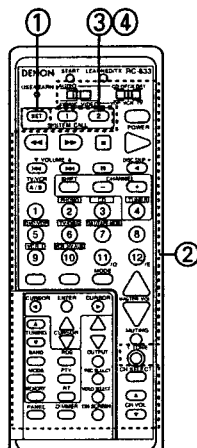
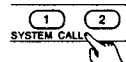


- 2** Press the buttons for the codes to be sent, changing the position of the slide switch as necessary. (Up to ten buttons can be set.) Buttons which have been "learned" and buttons which have been preset can also be selected.

- 3** Press the SYSTEM CALL button ("1" or "2") at which you want to store the codes. The setting is now stored.



- 4 Recalling**
Press the SYSTEM CALL button ("1" or "2") at which the desired codes have been stored. The series of codes is now sent.

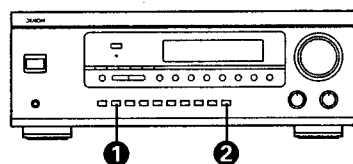


7 USING THE SURROUND FUNCTION

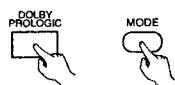
This unit is equipped with signal processing sections for decoding and reproducing movie soundtracks the same way as in movie theaters.

Before playing with the surround function

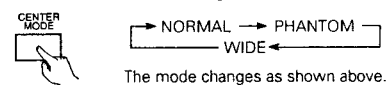
Before playing with the surround function, be sure to use the test tones to adjust the playback level from the different speakers. This adjustment can be performed from the remote control unit, as described below. Adjusting with the remote control unit using the test tones is only effective in the DOLBY PRO LOGIC mode. The adjusted levels are automatically stored in the memory.



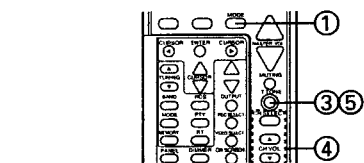
- 1** Set the Dolby Pro Logic mode.



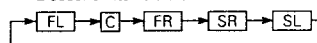
- 2** Select the center mode.
(Refer to the description of the center mode below.)
Select the center mode according to the center speaker.



- 3** Press the test tone button.



- 4** Test tones are produced from the speakers in the order shown below, at 4 second intervals for the first two cycles, 2 second intervals after that.



Use the channel volume adjust buttons to adjust so that the volume of the test tones is the same for all the speakers.

Press the channel select button to select the speaker to be adjusted, if necessary.



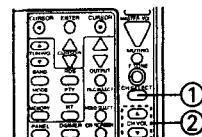
- 5** After completing the adjustment, press the test tone button again.



NOTES:

- When the center mode is set to Phantom, no test tones are output from the center speaker.
- When the center mode switch is pressed, the surround mode automatically switches to the DOLBY PRO LOGIC mode.

After adjusting using the test tones, adjust the channel levels either according to the playback sources or to suit your tastes, as described below.



- 1** Press the channel select button to select the speaker to be adjusted.



- 2** Adjust the level of the selected speaker.



Center Mode

Set the center mode as described below, according to the type of center speaker being used.

- Normal mode:** This mode is suited for an arrangement in which the center channel speaker is smaller than the left and right speakers. Signals below 100 Hz which have almost no effect on directional orientation are distributed to the left and right channels, whereas the center channel output signals greater than 100 Hz. As a result, the bass of the left and right channels increases the apparent deepness of the sound.
- Phantom mode:** Use this mode when center channel speaker is not used. A directional emphasis circuit provides signal reproduction which is electrically oriented to the center and this provides an exciting sound field for your enjoyment.
- Wide mode:** This mode is suited for an arrangement in which the center channel speaker is of the same grade as the left and right speakers. The entire sound band from low region to high is output to the center channel to provide an exciting sound field for your enjoyment.

NOTES:

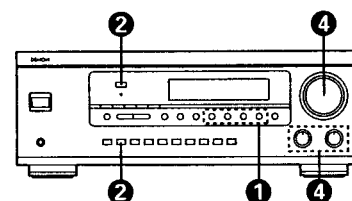
- The center mode applies to the DOLBY PRO LOGIC mode. The output from the center speaker is turned off if the center mode is set to the phantom mode in any surround mode other than Dolby Pro Logic.
- If a center speaker is added to the system afterwards or if the center speaker is changed, be sure to reset the center mode as described above.

Using the Dolby Pro Logic mode

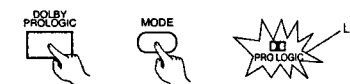
DOLBY PRO LOGIC

When using conventional video tapes, laser discs, TV programs or CDs with the mark, Dolby Pro Logic provides extremely natural sound movement and positioning, immersing you in the on screen action. Pro Logic uses a directional emphasis circuit to decode four output channels (front left and right, center and surround) from the two audio channels provided on the software. This set is equipped with three Dolby Pro Logic play modes: Normal, Phantom and Wide.

Play a pre-recorded source with the mark.



- 2** Set the DOLBY PRO LOGIC mode.



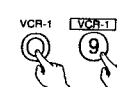
- 3** Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

- 4** Adjust the MASTER VOLUME and TONE controls.



- 1** Press the button for the program source to be played.

EX: VCR-1



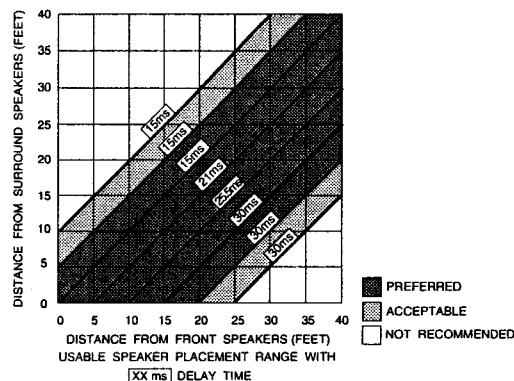
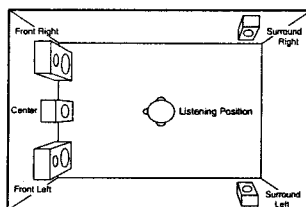
- 5** Adjust the delay time and seating position as necessary. (Refer to the next chart.)

The cursor increases the DELAY TIME and the cursor decreases it.



■ DELAY TIME

The optimum delay time will differ depending on the listening position. Referring to the chart below, set the optimum delay time for your room's space and seating position. For example, when the distance from the front speakers to the listening position is 20 feet and that from the surround speakers to the listening position is 15 feet, the optimum delay time will be 20 ms. The variable range of the delay time differs depending on the mode.



Dolby Surround systems with Pro Logic decoding most closely replicate the Dolby Stereo theatrical experience. Only two surround speakers are necessary in the home listening environment to provide the same enveloping sound field as multiple surround speakers in the theater.

Manufactured under license from Dolby Laboratories Licensing Corporation.
DOLBY, the double-D symbol and "PRO LOGIC," are trademarks of Dolby Laboratories Licensing Corporation.

Surround simulation

■ Types of surround modes and their characteristics

1	STEREO	Sound is produced from the two front channels. (Nothing is output from the Surround and center channels.)
2	6CH EXT. IN	Connect the output of the external Dolby Digital decoder to this unit's 6CH EXT. IN.
3	5CH STEREO	The signals of the left and right channels are distributed to the different speakers to achieve a stereo sound from all directions at the listening position.
4	CONCERT HALL	Use this setting to create the atmosphere of a concert hall.
5	LIVE	Use this setting to create the atmosphere of watching a live performance.
6	ROCK ARENA	The powerful reverberations of this mode produce a sound field which recreates the excitement of live concerts. This mode is effective for rock, popular music, etc.
7	JAZZ CLUB	This mode creates the sound field of a live house with a low ceiling and hard wall reverberations. The result is that the artist seems to be performing right before your eyes.
8	MONO MOVIE	In this mode, a sense of expansion is added to monaural audio sources. This mode is best suited for playing old movies or movie tapes recorded in monaural.

※ Depending on the program source being played, the effect may not be very noticeable.
In this case, try other surround modes, without worrying about their names, to create a sound field suited to your tastes.

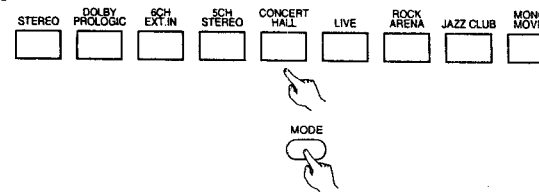
Personal Memory Plus function for EASY USE

This unit automatically stores the surround mode adding selected effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.

Using the surround simulation

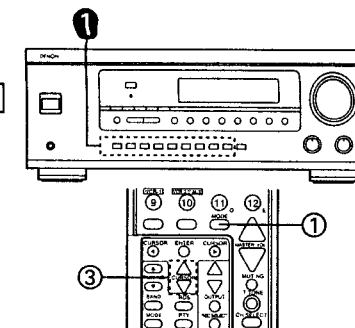
Preparations: Select the input device and start playback.

1 Select the surround mode according to the input source.



2 If necessary, adjust the levels. Refer to page 9.

3 Adjust the DELAY TIME to the desired settings.



NOTE:

- To listen to the signal of equipment that is connected to the "6CH EXT. IN" input jack, make sure the video input of the equipment is selecting the connected function and select "6CH EXT. IN" with the "6CH EXT. IN" mode button or with the remote control mode button.

■ Surround modes and parameters

MODE	The following table shows the presence or absence of signals in the various modes, and whether or not they can be controlled. Initial settings are indicated in parentheses.						
	OUTPUT CHANNEL (0 dB)				PARAMETER SOURCE		
	FRONT L/R	CENTER	SURROUND	SUBWOOFER	CENTER MODE	TEST TONE	DELAY TIME
STEREO	○	×	×	○	×	×	×
DOLBY PRO LOGIC	○	△	○	○	○	○	15 - 30 msec (20 msec) 1 msec / step
6CH EXT. IN	○	△	○	○	×	×	×
5CH STEREO	○	△	○	○	×	×	×
CONCERT HALL	○	△	○	○	×	×	0 - 33 msec (21 msec) 3 msec / step
LIVE	○	△	○	○	×	×	
ROCK ARENA	○	△	○	○	×	×	
JAZZ CLUB	○	△	○	○	×	×	
MONO MOVIE	○	△	○	○	×	×	

○ Signal present or controllable

△ Can be turned on and off according to the center mode setting.

× No signal or not controllable.

8 LISTENING TO THE RADIO

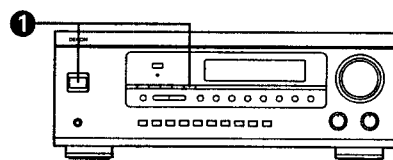
Auto preset memory

This unit is equipped with a function for automatically searching for FM broadcast stations and storing them in the preset memory.

- 1 Switch on the unit using the main unit's Power operation switch while holding in the MEMORY button. The unit automatically begins searching for FM broadcast stations.



- 2 When the first FM broadcast station is found, that station is stored in the preset memory at channel A1. Subsequent stations are automatically stored in order at preset channels A2 to A8, B1 to B8, C1 to C8, D1 to D8 and E1 to E8, for a maximum of 40 stations.

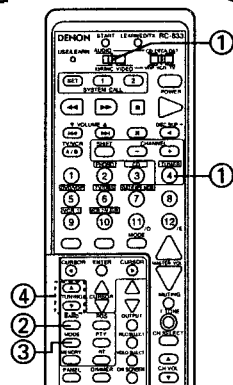
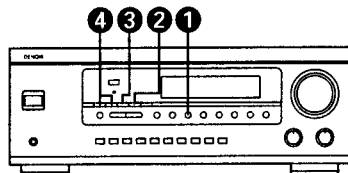


- 3 Channel A1 is tuned in after the auto preset memory operation is completed.

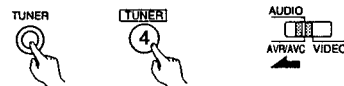
NOTES:

- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.
- To interrupt this function, press the POWER operation button.

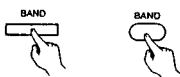
Auto tuning



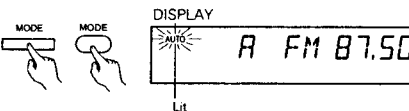
- 1 Set the input function to "TUNER".



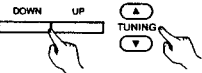
- 2 Watching the display, press the BAND button to select the desired band (AM or FM).



- 3 Press the MODE button to set the auto tuning mode.



- 4 Press the TUNING UP or DOWN button.



- Automatic searching begins, then stops when a station is tuned in.

NOTE:

- When in the auto tuning mode on the FM band, the "STEREO" indicator lights on the display when a stereo broadcast is tuned in. At open frequencies, the noise is muted and the "TUNED" and "STEREO" indicators turn off.

Manual tuning

- 1 Set the input function to "TUNER".

- 2 Watching the display, press the BAND button to select the desired band (AM or FM).

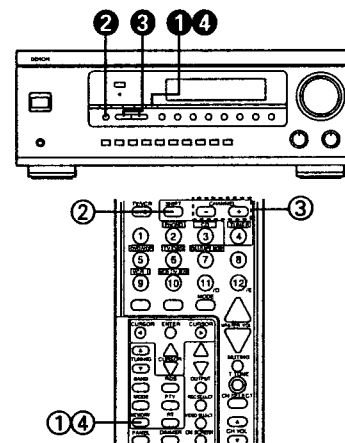
- 3 Press the MODE button to set the manual tuning mode. Check that the display's "AUTO" indicator turns off.

- 4 Press the TUNING UP or DOWN button to tune in the desired station. The frequency changes continuously when the button is held in.

NOTE:

- When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off.

Preset memory



Preparations:

Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory.

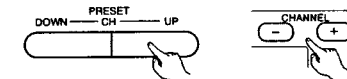
- 1 Press the MEMORY button.



- 2 Press the SHIFT button and select the desired memory block (A to E).



- 3 Press the PRESET UP or DOWN button to select the desired preset channel (1 to 8).



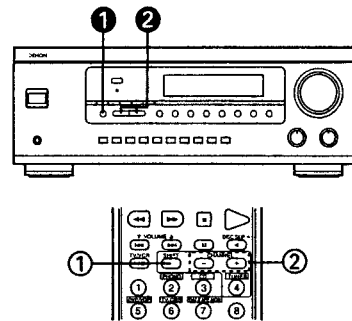
- 4 Press the MEMORY button again to store the station in the preset memory.



* To preset other channels, repeat steps 1 to 4.

A total of 40 broadcast stations can be preset — 8 stations (channels 1 to 8) in each of blocks A to E.

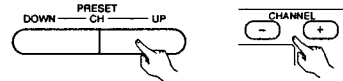
Recalling preset stations



- 1 Watching the display, press the SHIFT button to select the preset memory block.



- 2 Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.



RDS (Radio Data System)

RDS (works only on the FM band) is a broadcasting service which allows station to send additional information along with the regular radio program signal.

The following three types of RDS information can be received on this unit:

■ Program Type (PTY)

PTY identifies the type of RDS program.

The program types and their displays are as follows:

NEWS	News	DRAMA	Drama	ROCK M	Rock Music
AFFAIRS	Affairs	CULTURE	Culture	M. O. R. M	M.O.R. Music
INFO	Information	SCIENCE	Science	LIGHT M	Light Classical
SPORT	Sports	VARIED	Varied	CLASSICS	Serious Classical
EDUCATE	Education	POP M	Pop Music	OTHER M	Other Music

■ Traffic Program (TP)

TP identifies programs that carry traffic announcements.

This allows you to easily find out the latest traffic conditions in your area before you leaving home.

■ Radio Text (RT)

RT allows the RDS station to send text messages that appear on the display.

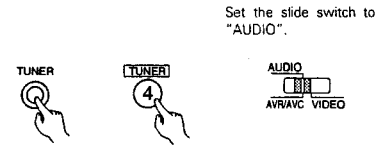
NOTE:

- The operations described below using the RDS, TPY and RD buttons will not function in areas in which there are no RDS broadcasts.

RDS search

Use this function to automatically tune to FM stations that provide RDS service.

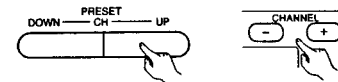
- 1 Set the input function to "TUNER".



- 2 Press the RDS button until "RDS SEARCH" appears on the display.



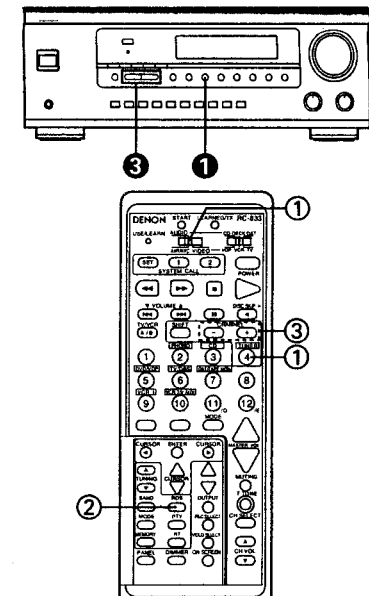
- 3 Press the PRESET UP or DOWN button to automatically begin the RDS search operation.



If no RDS stations is found with above operation, all the reception band are searched.

- 4 When a broadcast station is found, that station's name appears on the display.

- 5 To continue searching, repeat step 3. If no other RDS station is found when all the frequencies are searched, "NO RDS" is displayed.



PTY search

Use this function to find RDS stations broadcasting a designated program type (PTY).
For a description of each program type, refer to "Program Type (PTY)".

- 1 Set the input function to "TUNER".



Set the slide switch to "AUDIO".



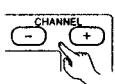
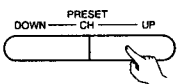
- 2 Press the RDS button until "PTY SEARCH" appears on the display.



- 3 Watching the display, press the PTY button to call out the desired program type.



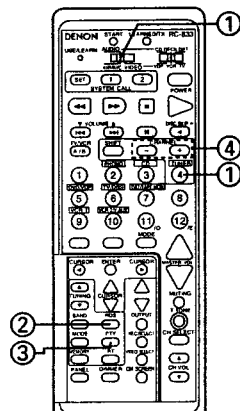
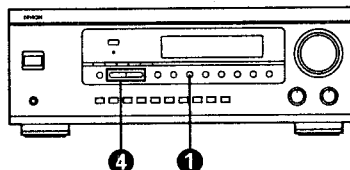
- 4 Press the PRESET UP or DOWN button to automatically begin the PTY search operation.



If there is no station broadcasting the designated program type with above operation, all the reception bands are searched.

- 5 The station name is displayed on the display after searching stops.

- 6 To continue searching, repeat step 4.
If no other station broadcasting the designated program type is found when all the frequencies are searched, "NO PROGRAMME" is displayed.



TP search

Use this function to find RDS stations broadcasting traffic program (TP stations).

- 1 Set the input function to "TUNER".



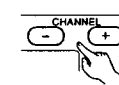
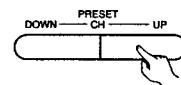
Set the slide switch to "AUDIO".



- 2 Press the RDS button until "TP SEARCH" appears on the display.

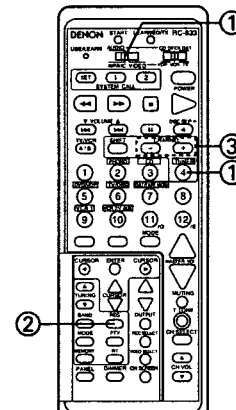
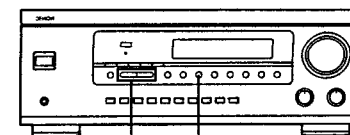


- 3 Press the PRESET UP or DOWN button TP search begins.



If no TP station is found with above operation, all the reception bands are searched.

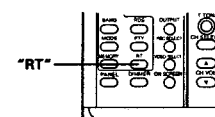
- 4 The station name is displayed on the display after searching stops.



- 5 To continue searching, repeat step 3.
If no other TP station is found when all the frequencies are searched, "NO PROGRAMME" is displayed.

RT (Radio Text)

"RT" appears on the display when radio text data is received. When the RT button is pressed while receiving an RDS broadcast station, the text data broadcast from the station is displayed. To turn the display off, press the RT button again. If no text data is being broadcast, "NO TEXT DATA" is displayed.

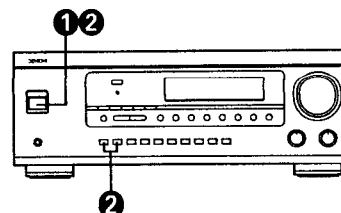


9 LAST FUNCTION MEMORY

- This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
- The unit is also equipped with a back-up memory. This function provides approximately one week of memory storage when the main unit's power switch is off and with the power cord disconnected.

10 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.



- 1 Switch off the unit using the main unit's POWER operation switch.
- 2 Hold the following STEREO button and DOLBY PRO LOGIC button, and turn the main unit's POWER operation switch on.
- 3 Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initialized.

11 TROUBLESHOOTING

If a problem should arise, first check the following:

1. Are the connections correct?
2. Have you operated the receiver according to the Operating Instructions?
3. Are the speakers, turntable, and other components operating properly?

If this unit is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

	Symptom	Cause	Measures	Page
Common problems arising when listening to the CD, records, tapes, and FM broadcasts, etc.	DISPLAY not lit and sound not produced when POWER operation switch set to on.	<ul style="list-style-type: none"> Power cord not plugged in securely. 	<ul style="list-style-type: none"> Check the insertion of the power cord plug. Turn the power on with the remote control unit after turning the POWER operation switch on. 	4 7
	DISPLAY lit but sound not produced.	<ul style="list-style-type: none"> Speaker cords not securely connected. Improper position of the audio function button. Volume control set to minimum. MUTING is on. 	<ul style="list-style-type: none"> Connect securely. Set to a suitable position. Turn volume up to suitable level. Switch off MUTING. 	5 7 7 8
	DISPLAY is not displayed and the "STANDBY" LED flashes at a high rate.	<ul style="list-style-type: none"> Speaker terminals are short-circuited. Block the ventilation holes of the set. The unit is operating at continuous high power conditions and/or inadequate ventilation. 	<ul style="list-style-type: none"> Switch power off, connect speakers properly, then switch power back on. Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. 	5 3 3
	Sound produced only from one channel.	<ul style="list-style-type: none"> Incomplete connection of speaker cords. Incomplete connection of input/output cords. 	<ul style="list-style-type: none"> Connect securely. Connect securely. 	5 4
	Positions of instruments reversed during stereo playback.	<ul style="list-style-type: none"> Reverse connections of left and right speakers or left and right input/output cords. 	<ul style="list-style-type: none"> Check left and right connections. 	4, 5
	Humming noise produced when record is playing.	<ul style="list-style-type: none"> Ground wire of turntable not connected properly. Incomplete PHONO jack connection. TV or radio transmission antenna nearby. 	<ul style="list-style-type: none"> Connect securely. Connect securely. Contact your store of purchase. 	4 4 —
When playing records	Howling noise produced when volume is high.	<ul style="list-style-type: none"> Turntable and speaker systems too close together. Floor is unstable and vibrates easily. 	<ul style="list-style-type: none"> Separate as much as possible. Use cushions to absorb speaker vibrations transmitted by floor. If turntable is not equipped with insulators, use audio insulators (commonly available). 	— —
	Sound is distorted.	<ul style="list-style-type: none"> Stylus pressure too weak. Dust or dirt on stylus. Cartridge defective. 	<ul style="list-style-type: none"> Apply proper stylus pressure. Check stylus. Replace cartridge. 	— — —
	Volume is weak.	<ul style="list-style-type: none"> MC cartridge being used. 	<ul style="list-style-type: none"> Replace with MM cartridge or use a head amplifier or step-up transformer. 	4
Remote control unit	This unit does not operate properly when remote control unit is used.	<ul style="list-style-type: none"> Batteries dead. Remote control unit too far from this unit. Obstacle between this unit and remote control unit. Different button is being pressed. ⊕ and ⊖ ends of battery inserted in reverse. 	<ul style="list-style-type: none"> Replace with new batteries. Move closer. Remove obstacle. Press the proper button. Insert batteries properly. 	5 5 5 — 5

12 SPECIFICATIONS

• Audio section (Power amplifier)

Rated output:

Front: 65 W + 65 W (8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.)
Center: 65 W (8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.)
Surround: 65 W + 65 W (8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.)

Dynamic power:

85 W × 2 ch (8 Ω / ohms)
145 W × 2 ch (4 Ω / ohms)
175 W × 2 ch (2 Ω / ohms)

Output terminals:

Front/Center: A or B or Bi-wiring 6 to 16 Ω / ohms
A + B 12 to 16 Ω / ohms
Surround: 6 to 16 Ω / ohms

(Analog)

Line input (Each line input—FRONT PRE OUT)

Input sensitivity / input impedance: 200 mV / 47 kΩ / kohms

Frequency response: 10 Hz ~ 50 kHz: +1, -3 dB

Tone control range: BASS: ±10 dB at 100 Hz

TREBLE: ±10 dB at 10 kHz

S / N: 96 dB

Distortion: 0.05% (20 Hz ~ 20 kHz)

Rated output: 1.2 V

Maximum headphones output: 27 mW (8 Ω / ohms)

Phono equalizer (PHONO input—REC OUT)

Input sensitivity / input impedance: 2.5 mV / 47 kΩ / kohms

RIAA deviation: ±1 dB (20 Hz to 20 kHz)

S / N: 74 dB (A weighting, with 5 mV input)

Rated output / Maximum output: 150 mV / 8 V

Distortion factor: 0.03% (1 kHz, 3V)

• Video section

(Standard video jacks)

Input / output level and impedance: 1 Vp-p, 75 Ω / ohms

Frequency response: 5 Hz ~ 10 MHz +1, -3 dB

• Tuner section

Receiving Range:

87.50 MHz ~ 108.00 MHz

Usable Sensitivity: 1.0 μV (11.2 dBf)

50 dB Quieting Sensitivity: MONO 1.6 μV (15.3 dBf)

STEREO 23 μV (38.5 dBf)

S / N: (IHF-A): MONO 80 dB

STEREO 75 dB

Total Harmonic Distortion MONO 0.15%

(at 1 kHz): STEREO 0.3%

• General

Power supply: AC 230 V, 50 Hz

Power consumption: 190 W

Maximum external dimensions: 434 (W) × 161 (H) × 416 (D) mm (17-3/32" × 6-11/32" × 16-3/8")

Weight: 10.6 kg (29 lbs 15 oz)

• Remote control unit (RC-833)

Batteries: R6P / AA Type (two batteries)

External dimensions: 70 (W) × 215 (H) × 19 (D) mm (2-3/4" × 8-15/32" × 3/4")

Weight: 180 g (Approx. 6 oz) (including batteries)

* For purposes of improvement, specifications and design are subject to change without notice.